generating Doppler shift information configured to detect neovascular flow through the tissue.

7. (once amended) Guide wire guiding apparatus in accordance with Claim 1, wherein said interferometric system further comprises a first optic fiber having a first end and a second end and wherein said first optic fiber second end is polished at an angle of about 8 degrees relative to a cross-sectional plane orthonormal to a long axis of said first optic fiber.

11. (once amended) Guide wire guiding apparatus in accordance with Claim 1 further comprising a visual graphic display coupled to said interferometric system, said visual graphic display configured to display the interference information and the Doppler shift information.

12. (once amended) Apparatus for detecting neovascular flow through an obstruction in a blood vessel, said apparatus comprising: an interferometric apparatus;

a broad band filter coupled to an output of the interferometric apparatus, said interferometric apparatus generating interferometric peaks of varying frequencies; and

a frequency-to-voltage converter coupled in series to said broad band filter.

14. (once amended) A method to determine neovascular flow through tissue in a vessel, said method comprising the step of performing a Doppler shift analysis on frequencies of interference peaks generated by an interferometric system examining the vessel.

15. (once amended) A method in accordance with Claim 14 wherein performing the Doppler shift analysis includes the steps of:

applying a known amplitude-modulated voltage signal to a first piezo electric transducer and a second piezo electric transducer to produce a first known component of a Doppler frequency shift in the frequencies of interference peaks;

measuring an actual Doppler frequency shift in the interference peaks;

subtracting the first known component of the Doppler frequency shift from the actual Doppler frequency shift to determine a second component of the actual Doppler frequence shift, wherein the second component reveals the presence of neovascular channels in the vessel.